FOOD CULTER KNOWLEDGE AND EATING PRACTICES AMONG MEDICAL COLLEGE STUDENTS IN DUHOK

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ABSTRACT

Background: Poor nutritional behavior is a major public health problem among young adults who experience the transition into university life, as this time is associated with unhealthy lifestyle characteristics. This study aimed to assess the pattern of eating habits among medical students, to increase their awareness of the food pyramid and encourage them to apply it and increase their awareness of the benefits of healthy eating for physical and mental health.

Methods: This is a cross-sectional faculty-based study conducted among 650 medical students of both genders in all six grades of the College of Medicine/ University of Duhok. The questionnaire was composed of close-ended questions on socio-demographics, eating habits, and knowledge assessment factors, as well as weight and height. Body mass index (BMI) was used to assess students' weight status.

Results: The study revealed that 68.2% had normal BMI, 10.6% had low BMI, 16% had high BMI and 5.2% had very high BMI. A total of 64.5% had good knowledge of the food pyramid, while 56% did not know the required calories per day. Fifty-seven percent were on three meals daily and preferred homemade meals. Nearly three-quarters like fast food and crispy food. 50.3% used to skip breakfast. 45.4% used to eat an extra meal before sleeping time. 47.4% prefer salty food. 57.4% used to eat salads with meals and 84.8% eat fruits usually.

Conclusions: Many medical students of both genders have unhealthy dietary habits, in addition to insufficient knowledge of the food pyramid and required daily calories. Medical students need preuniversity and college-based plans and counseling on nutrition.

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Keywords: Body mass index, Eating habits, Medical students.

Food culture is the term used to describe the customs, values, and institutions that surround the growing, distributing, and consuming of food.[1] Food cultures are deeply rooted parts of our natural history that have evolved over time therefore they are essential parts of how we support our overall health and nourish our bodies[2]. Eating habits refer to why and how people eat, which foods they eat and with whom they eat, as well as the ways people obtain, store, use, and discard food[3]. Healthy eating is one of the most substantial means of enhancing health. A balanced diet should consist of natural and fresh meals, as well as enough of fruits, vegetables, and foods with vitamins and minerals.[4] It also entails regular diet and behavior, which is good for promoting and preserving both physical and psychological health.[5] Due to time constraints and tensions, adult students making the transition from high school to university find it difficult to maintain good eating routines and instead skip meals, eat unhealthy snacks, eat out, and eat fast food.[6] The most common factors affecting food choices in this young population include changes in living arrangements costs, financial resources and the availability of convenience and fast meals[7-

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[10]. Universities can be an ideal setting for preventive intervention programs particularly medical schools where future health personnel are trained, as they have greater medical information regarding appropriate eating patterns, medical students are expected to have good eating habits and lead healthy lifestyles. As a result, they are expected to serve as role models for their classmates when it comes to the implementation of good eating patterns, but despite this, they don't seem to be able to do so[11] because the stress of university life and medical studies severely impacts their eating habits.[12] Medical students should practice good eating habits since they will be the doctors of the future, and those who don't practice healthy living themselves are more likely to fail to provide their patients with opportunities to improve their health.[13] This study aimed to assess the pattern of eating habits among medical students, in order to increase their awareness of the food pyramid and encourage them to apply it and increase their awareness of the benefits of healthy eating for physical and mental health.

SUBJECTS AND METHODS

Study design, Setting and participants

This questionnaire-based cross-sectional study was carried out between January and March of 2021 and included undergraduate medical students in the first to sixth years of study at the College of Medicine, University of Duhok in Duhok governorate, Kurdistan Region of Iraq. All the students were included.

The students invited to participate in this study were studying in the academic year 2021–2022.

Data Collection.

After arrangements were made with the Medical College –Dean Office, students in each of the academic years were approached officially, with the help of the students' representatives of all academic stages.

The instrument used was a self-administered English-language questionnaire.

The questionnaire's reliability was assessed by the Community Medicine Department. There were three sections in the survey, where the first section consisted of questions about demographic information such as age, gender, academic year, body weight and height, residence, and living arrangement. The second section consisted of 2 questions related to their knowledge of the food pyramid and the daily requirements of calories. The third section consisted of 28 questions dealing with eating and drinking patterns and types of meals. For example, the questionnaire probed habits related to regular meals; daily breakfast; the frequency of meals; snacks, vegetables, fruits, and fried, crispy, fatty, salty food consumption; eating alone or with friends and family, and consuming fast food. The questionnaires were distributed to the students during their teaching sessions and students were briefed about the objectives of the study and were instructed on the spot by the researcher, on how to fill out the questionnaire comprehensively and realistically.

Ethical Considerations

After potential participants agreed to participate, the aims and advantages of the research were explained to them, and they were given a guarantee that the information gained would be confidential and would have no effect on their course progress. The Ethical Committee for Scientific Research at the General Health Directorate in Duhok approved this study.

Data Analysis

Data were entered and analyzed using SPSS 26.0. Mean, standard deviation, and range were used to describe numerical data. Frequency and frequency percent tables were used to describe categorical data. The unpaired t-test was used to examine the difference in means and the Chi-square test was used to examine the association among categorical variables. A p-value less than 0.05 was regarded as statistically significant and printed in bold font.

RESULTS

During the study period, there were 675 medical students of both genders. Of them 375 were in phase I (preclinical phase) and 300 were in phase II (clinical phase) of the curriculum, including the 1st year (n= 169), 2nd year (n= 112), 3rd year (n= 94), 4th year (n= 78), 5th year (n= 100) and 6th year (n= 122). The total number of students completing the study was 650, as 25 students did not respond (participation rate of 96.3%).

The main characteristics of the respondents, including 318 (48.9%) males and 332 (51.1%) females, are displayed in Table 1. From the total, those aged 20-22 years were 288 (44.3%), and 23-28 years were 139 (21.4%). Regarding their Body Mass Index (BMI), those with BMI of < 18.5 were 69 (10.6%), and those with BMI of ≥ 30 were only 34 (5.2%).

Table 1. Distribution of the students of Duhok College of Medicine according to age and BMI, by gender

Characteristic		Males		Females		Total	
		No.	%	No.	%	No.	%
Age	17 - 19 years	104	32.7	119	35.8	223	34.3
	20 - 22 years	139	43.7	149	44.9	288	44.3
	23 - 28 years	75	23.6	64	19.3	139	21.4
BMI	Underweight	23	7.2	46	13.9	69	10.6
	Normal weight	201	63.2	242	72.9	443	68.2
	Overweight	65	20.4	39	11.7	104	16.0
	Obese	29	9.1	5	1.5	34	5.2
Total		**318**	**100.0**	**332**	**100.0**	**650**	**100.0**

Regarding knowledge of the food pyramid among all respondents, 419 (64.5%) were found to have good knowledge, of them 171 (53.8%) were males and 248 (74.7%) were females, with a significant p-value (< 0.001). The opposite was true about female students' knowledge of the required calories per day, as more than half of them 184 (55.4%) found to not know. Also, more than half of male students 180 (56.6%) were found to not know the required calories per day (Table 2).

Table 2. Relationship of gender, with knowledge about food pyramid and required Calories

Knowledge		Males		Females		Total		
		No.	%	No.	%	No.	%	P-value
Are you aware about food pyramid?	Yes	171	53.8	248	74.7	419	64.5	< 0.001
	No	147	46.2	84	25.3	231	35.5	
Do you know how many Calories/day, your body requires?	Yes	138	43.4	148	44.6	286	44.0	0.762
	No	180	56.6	184	55.4	364	56.0	
Total		**318**	**100.0**	**332**	**100.0**	**650**	**100.0**	

Regarding the distribution of students' impressions of their weights, by their actual BMI, from

Regarding the distribution of students' impression of their weights, by their actual BMI, from the total number of respondents, 69 of them were under-weight, (and 62.3%) described themselves as underweight. Also of 443 students, who's their actual BMI was normal, (83.1%) described themselves as having normal body weight. Of those who were overweight according to their actual BMI 104 students of them (37.5%) described themselves as overweight. Those with actual BMI as obese were only 34 students of them (82.4%) described themselves as obese, with a p-value < 0.001 (Table 3).

Table 3. Distribution of students' impression of their weights, by their actual BMI

Actual BMI	You describe yourself as								
	Underweight		Normal weight		Overweight		Obese		Total
	No.	%	No.	%	No.	%	No.	%	No.
Underweight	43	62.3	26	37.7	0	0.0	0	0.0	69
Normal weight	47	10.6	368	83.1	19	4.3	9	2.0	443
Overweight	0	0.0	28	26.9	39	37.5	37	35.6	104
Obese	0	0.0	1	2.9	5	14.7	28	82.4	34
Total	**90**	**13.8**	**423**	**65.1**	**63**	**9.7**	**74**	**11.4**	**650**

P < 0.0

Meanwhile there were no significant differences concerning agreement between actual BMI and students' impression of their weight, by gender (Table 4).

Table 4. Agreement between actual BMI and students' impression of their weight, by gender

	Males		Females		Total	
	No.	%	No.	%	No.	%
Agreements	229	72.0	249	75.0	478	73.5
Disagreements	89	28.0	83	25.0	172	26.5
Overestimation	35	11.0	56	16.9	91	14.0
Underestimation	54	17.0	27	8.1	81	12.5
Total	**318**	**100.0**	**332**	**100.0**	**650**	**100.0**

P = 0.338

From the total respondents, (57.1%) found to take three meals per day, female students showed more frequency in missing one meal who were about (34.0%), while among male-students only (23.6%) were taking two meals per day, in the meantime male students showed to have more frequency in taking four meals (10.7%), while the female students who were on four meals per day found to be (6.9%). From the total of both sexes who were on more than four meals were (2.8%), with a significant P-value (0.023).

Regarding family gatherings to eat, more than half of the respondents (62.9%) prefer eating with their families, among them the female students formed higher frequency (70.2%), while eating with colleagues were preferable among male students who were (26.4%), rather than female who were (15.7%), with a p-value <0.001.

(78.3%) of total respondents preferred home-made meals rather than restaurant meals with no significant difference in between males and females. Also, there was no significant difference between the sexes

concerning canned food eating, among male students only (4.1%) and among female students only (5.4%) were always eating canned food. There was no significant difference between both sexes concerning fast and ready food eating, (74.3%) of the total respondents found to like it usually and only (25.7%) found to dislike it. Also, no significant difference was found in relation to crispy food eating between male and female students, as most of them (76.6%) like crispy food (Table 5).

Table 5. Distribution of food habits, by gender

Food habit		Males		Females		Total		P
		No.	%	No.	%	No.	%	
How many meals do you take per day?	One meal	6	1.9	10	3.0	16	2.5	0.023
	Two meals	75	23.6	113	34.0	188	28.9	
	Three meals	193	60.7	178	53.6	371	57.1	
	Four meals	34	10.7	23	6.9	57	8.8	
	More than 4 meals	10	3.1	8	2.4	18	2.8	
Do you often eat	Alone	58	18.2	47	14.2	105	16.2	<0.001
	With your family	176	55.3	233	70.2	409	62.9	
	With your colleagues	84	26.4	52	15.7	136	20.9	
Do you prefer	Restaurant meals	70	22.0	71	21.4	141	21.7	0.846
	Home-made meals	248	78.0	261	78.6	509	78.3	
Do you eat canned food?	Daily	13	4.1	18	5.4	31	4.8	0.412
	1-3 per week	150	47.2	137	41.3	287	44.2	
	Once per month	105	33.0	125	37.7	230	35.4	
	Never	50	15.7	52	15.7	102	15.7	
Do you like fast food?	Yes	238	74.8	245	73.8	483	74.3	0.760
	No	80	25.2	87	26.2	167	25.7	
Do you like crispy (firm and brittle)food?	Yes	236	74.2	262	78.9	498	76.6	0.157
	No	82	25.8	70	21.1	152	23.4	
Total		**318**	**100.0**	**332**	**100.0**	**650**	**100.0**	

Nearly half of the total respondents (50.3%) used not to take their breakfast regularly before going to the college, the female students were more including, 192 (57.8%) than the male (42.5%) with a p-value < 0.001. Male students were more committed to eating their breakfast during the period between 7:00 am. to 10:00 am 209 (70.2%), while the female students 128 (42.3%) showed to be much more than the male students in eating their breakfasts after 10:00 am. with a p- value of (0.012). Meantime, the breakfast meal was the main and most favorite meal among female students 87 (26.2%) rather than among male 39 (12.3%). While the lunch and dinner meals were the main and the most favorite among male students 198 (62.3%), 81 (25.5%) rather than female students 179 (53.9%), 66 (19.9%). Generally, the lunch meal considered to be the main and the most favorite meal among more than half of the respondents of both sexes 377 (58.0%). With p-value of < 0.001. From the total respondent 295 (45.5 %) were eating an extra meal before sleeping, that was more among male students 162 (50.9%), rather than female students 134 (40.4%), with a p-value of 0.009. It is worthwhile to mention that the fast food was their most option for

their pre-sleep extra meal. Whether they liked to eat sweets and preferred salty food, there was no significant P-value. While more than half of the respondents 425 (65.4%) did not preferred fatty food with a higher percentage among female students 235 (70.8%) and less among male students 190 (59.7%), with a p-value of 0.003.

The female students showed that they preferred eating salads (vegetables) with meals 212 (63.9%) so much preferred and 97 (29.2%) a little bit preferred more than male students161 (50.6%) highly preferred and 120 (37.7%) a little bit preferred, with a significant P- value of 0.002. Regarding fruit eating there was no difference between male and female students, from the total 551 (84.8%) showed to like eating fruit (Table 6).

Table 6. Distribution of other food habits, by gender

Food habit		Males (n = 318)		Females (n = 332)		Total (n = 650)		P
		No.	%	No.	%	No.	%	
Do you regularly eat breakfast?	Yes	183	57.5	140	42.2	323	49.7	<0.001
	No	135	42.5	192	57.8	327	50.3	
Usually, the time of your breakfast is between	7 - 8 am	155	52.0	125	41.3	280	46.6	0.012
	8 - 9 am	30	10.1	20	6.6	50	8.3	
	9 - 10 am	24	8.1	30	9.9	54	9.0	
	10 - 11 am	51	17.1	75	24.8	126	21.0	
	After 11 am	38	12.8	53	17.5	91	15.1	
Which one is your main and favorite meal?	Breakfast	39	12.3	87	26.2	126	19.4	<0.001
	Lunch	198	62.3	179	53.9	377	58.0	
	Dinner	81	25.5	66	19.9	147	22.6	
Do you usually eat an extra meal before sleep?	Yes	162	50.9	134	40.4	296	45.5	0.009
	No	156	49.1	198	59.6	354	54.5	
If you usually eat an extra meal before sleep, is it?	Fast food	38	23.5	18	13.4	56	18.9	0.161
	Just a snack	63	38.9	61	45.5	124	41.9	
	Sweets	27	16.7	27	20.1	54	18.2	
	Home-made meal	34	21.0	28	20.9	62	20.9	
Would you like to eat sweets?	Yes, so much	118	37.1	127	38.3	245	37.7	0.797
	Yes, little bit	173	54.4	173	52.1	346	53.2	
	Never	27	8.5	32	9.6	59	9.1	
Do you prefer your food to be salty?	Yes	142	44.7	166	50.0	308	47.4	0.172
	No	176	55.3	166	50.0	342	52.6	
Do you prefer your food to be fatty?	Yes	128	40.3	97	29.2	225	34.6	0.003
	No	190	59.7	235	70.8	425	65.4	
Do you usually prefer to have salads (vegetables) with your meals?	Yes, so much	161	50.6	212	63.9	373	57.4	0.002
	Yes, little bit	120	37.7	97	29.2	217	33.4	
	Never	37	11.6	23	6.9	60	9.2	
Do you like eating fruits?	Yes	270	84.9	281	84.6	551	84.8	0.925
	No	48	15.1	51	15.4	99	15.2	

DISCUSSION

The Medical College was chosen as the setting, firstly due to the high level of knowledge and intelligence of its students that allowed them to be accepted there, thus, the investigator aims to conduct an assessment on their knowledge. Secondly, these students will become physicians in the future and will have contact with majority of the population on a daily basis, so they will have a big role in raising awareness on this topic.

In this study the percentages of underweight, overweight and obese do not resemble those reported in other similar studies, like in Egypt (9.5%, 36.9% and 12.5%)[14], and in Cameron (4.9%, 21.7% and 3%)[15].

This study revealed that, females were more prone to overestimate their weight, may be because they think their weight is not ideal, and they are dissatisfied with their actual weight and wish to be fit as a form of beauty.

Regarding knowledge on food pyramid among all participants, female students were more aware of the food pyramid due to their focus on body agility to maintain female esthetics. A similar study done in University Brunei Darussalam showed higher percentage (96.4%) having good knowledge on food pyramid, but showed concerning the same finding regarding knowledge among female students which was higher than that among male students 16. This study showed the opposite about female-students' knowledge on the required calories per day, as more than half of them found to have no knowledge. Also, more than half of the male students found to have no knowledge on the required calories per day. In fact, this is unexpected with medical college students.

This study showed that the percentage of those who were on three meals per day, regularly was higher than shown in similar studies done in Saudi Arabia, as in King Abdul-Aziz University (50.5%)[17], Rass Qassim University (36.7%)[18], and Abha (31.0%)[19] Meanwhile, this study finding was lower than that documented in China (83.6%)[13] Lebanon (61.4%)[20], and Sudan (62.8%)[21] but similar to Malaysian medical students (57.6%)[22]. but the male students showed to have higher percentage in taking four meals daily in a comparison to female. A study in Brunei Darussalam showed 57.4% skipped one meal and 14.3% have had more than three meals per day 16. Regular breakfast eating is essential for medical students to have enough energy intakes to get over the malaise caused by a rigorous program of daily studies[23]. Breakfast is often thought to be the most important meal of the day as it provides energy for the brain and improve learning. Skipping breakfast may affect performance during the rest of the day[24]. Research has shown that consumption of healthy breakfast is associated with important health outcomes including improved cognitive performance[25], concentration and reduced fatigue[24]. In this study, the main missing meal was breakfast with a higher percentage among females which may be due to females are more committed to maintaining their fitness through diet regimen; also, they spend most of the time arranging their grooming, galloping at the expense of breakfast time. Our findings were lower than showed in Basra (60.4%)[26], Jeddah (65.3%)[17] and Ghana Medical Colleges (71.9%)[24], but it was higher than that reported in Abha (49%)[25] and in Lebanon (31.8%)[20] Similar to our finding female students were found more likely to skip breakfast than males in

Basra[26] and Ghana[24]. This study revealed no significant difference between genders in favoring home-made meals over restaurant meals which reflects the social nature of the society and a known food culture to them. This is similar to the results of a study conducted on Malaysian medical students[22].

Meanwhile, this study showed that the percentage of canned food eating habit was very low with no significant difference between both genders; this low percentage reflects the students' awareness of the health risks behind canned food contents, in addition to their food culture which discourages canned food. This is unlike the findings of a study done in Bethel College, Mishawaka, which showed a high percentage (65.3%) consuming processed (canned) food.[27] It is worthwhile to mention that the leading cause of bad nutrition in college students is eating fast food which may lead to obesity and malnourished. 28 In regard to this point, this study revealed high percentage of both genders like it, which resembles those shown by other studies conducted on medical students, as in Egypt (two-thirds of respondents)[29], in Patna, India (all the respondents)[30], in Dammam (91.3%)[11], actually these figures are alarming and represent a serious health concern. It is worthwhile to mention that this study showed a high percentage of those like eating crispy food like chips unlike the finding of a study done in Duhok University in 2020 - 2021 which was 18.15%[31]. Regarding family gatherings to eat as a popular social custom in our society, the female students formed higher frequencies. This reflects the social life of females in our society, which makes them closer to the family environment, while eating with colleagues were more preferable among male-students. In this study, the percentage of students preferring eating with their family was less than that in a study done in the University Brunei Darussalam (72.3%)[16]. This study revealed that the percentage of those used to eat alone was higher than that shown in King Abdulaziz University-Medical College (5%)[17]. In this study, a high percentage of total respondents preferred home-made meals rather than restaurant meals were reflecting the real social nature of their society. This study showed that lunch meal is considered the main and the most favorite meal among more than half of the respondents. Actually, this goes with community habits and food culture in this area. This finding does not resemble those revealed in a study done in Cameroon which revealed supper as the most consumed meal (78.8%)[15]. Regarding breakfast time which should be from 7:00 am to 10:00 am as an optimum time[32], this study showed that male participants were more prone to take their breakfasts during this period. However, it was the favorite meal among female rather than among male, while the lunch and supper meals were more favorite among males. In this study an unpleasant eating habit was found which is eating an extra meal before sleeping and more shown among male participants. Also, the more unpleasant was the fast food which was their second most option for their pre-sleep extra meal. This study revealed no difference between both genders in liking sweets and in preferring salty food.

Actually, both sugar and salt are considered the white enemies of health if taken more than the daily requirement, but many students are not aware about the risks of these two materials. This unhealthy eating habit is linked to their strong desire for fast food that is high in fats, salt and sugar[33].

Although related questions were not standardized, this study showed a high percentage of both genders who do not prefer fatty food; this is a good habit and female students were more aware because they are more interested in keeping their weight within the framework of grace and beauty, unlike the findings of a study in Jeddah – Saudi Arabia which revealed 0.3%[17]. Here, it is necessary to address the issue of the excessive demand for fast food by the students, and on the other hand, their keenness to reduce fatty foods in order to avoid obesity, which indicates shortage in their knowledge of healthy nutrition.

Regarding salads (vegetables) eating with meals, the female students showed a higher percentage. Meantime, the results revealed a very high percentage of those like eating fruits. In fact, these are good eating habits and a high-end food culture. It is clear that they are aware of the health benefits of eating vegetables and fruits. These findings are higher than those reported by other studies done in Saudi Arabia which showed only 22% consumed vegetables daily 34, and 31.5% consumed fruit[35]. Also, a study done on medical students in Cameron showed only 4.3% consumed fruits and 20% consumed vegetables[15], while 83.5% of Asian (Chinese) college students consumed fruits and vegetables daily[13], which is similar to this study findings.

In conclusion, many medical students, of both genders, have unhealthy dietary habits regardless of their academic levels, like high demand for fast food, missing meal mainly breakfast, consumption of extra meals mainly before sleep, preferring salty food, in addition to insufficient knowledge on food pyramid and required daily calories. Medical students need to have strategic intensive university and college-based plans and counseling for their nutrition, which will be reflected on better community health and wellbeing.

The promotion of healthy behaviors, such as eating nutritious foods, appears to be greatly aided by a variety of interventions, including text messaging, smartphone applications, and college courses. The current college-aged group should have had education on nutrition back in elementary schools via the Food Pyramid. Nutrition is vital for the maintenance of health and prevention of disease. The burden of nutrition-related chronic diseases (such as CVD, cancer, diabetes and osteoporosis) and obesity is increasing rapidly world-wide. Nutritional knowledge plays a pivotal role in the adoption of healthier food habits, but it must be noted that knowledge on its own cannot bring about the desired changes due to the complex nature of food behavior.

COMPETING INTEREST

There was no competing interest.

REFERENCES

1. Anonymous what-is-food-culture. What is Food Culture? A Complete Guide [Internet]. Accessed 2022 May 12. Available from:https://foodtrottercom › food-cultures › –
2. Anonymous what-is-food-culture [Internet].Accessed 2022Jan 2. Available from https://thewellco.co ›.
3. Dolores CSJ, Ed. Nutrition and Wellbeing A to Z. Detroit (USA): Thompson Gale:2004.
4. Nelson MC, Story M, Larson NI, NeumarkSztainer D, Lytle LA. Emerging adulthood and college-aged youth: an overlooked age for weight-related behavior change. *Obesity*. 2008; 16(10): 2205–2211. doi:10.1038/oby.2008.365

[PubMed] [CrossRef] [Google Scholar].

5. Musaiger AO, Kalam F. Dietary habits and lifestyle among adolescents in Damascus, Syria. *Ann Agric Environ Med*. 2014; 21:2. doi:10.5604/1232-1966.1108616 [PubMed] [CrossRef] [Google Scholar]
6. Sogari G, Velez-Argumedo C, Gómez M, Mora C. College students and eating habits: a study using an ecological model for healthy behavior. *Nutrients*. 2018;10(12):1823. doi:10.3390/nu10121823 [PMC free article] [PubMed] [CrossRef] [Google Scholar]
7. Brevard, P. B. Ricketts, C. D.: Residence of college students affects dietary intake, physical activity, and serum lipid levels. J Am Diet Assoc.1996: 35–38
8. Pan Y, Dixon, Z humbug, S Huffman, F Asian students change their eating patterns after living in the United States. Am Diet Assoc.1999, 99. 54–57
9. Papadaki, A., Scott, J. A.: The impact of eating habits of temporary translocation from a Mediterranean to a Northern European environment. European Journal of Clinical Nutrition, 56, 2002, pp. 455–461.
10. Nicklas, T. A., Baranowski, T., Cullen, K. W., Berenson, G.: Eating patterns, dietary quality and obesity. Journal of the American College of Nutrition, 20, 2001, pp. 599–608
11. Al-Qahtani MH. Dietary habits of Saudi medical students at University of Dammam. *Int J Health Sci*. 2016; 10(3): 353–362. [PMC free article] [PubMed] [Google Scholar].
12. Mikolajczyk RT, El Ansari W, Maxwell AE. Food consumption frequency and perceived stress and depressive symptoms among students in three European countries. *BMC Nutr*. 2009; 8(1): 31. [PMC free article] [PubMed] [Google Scholar].
13. Sakamaki R, Toyama K, Amamoto R, Liu C-J, Shinfuku N. Nutritional knowledge, food habits and health attitude of Chinese university students–a cross sectional study. *BMC Nutr*. 2005;4(1):4. [PMC free article] [PubMed] [Google Scholar].
14. Bakr EM, Ismail NA, Mahaba HM. Impact of life style on the nutritional status of medical students at Ain Shams University. J Egypt Pub Health Assoc. 2002;77(1-2):29–49. [PubMed] [Google Scholar].
15. Fala Bede, Samuel Nambile Cumber, Claude Ngwayu Nkfusai, Mbinkar Adeline Venyuy, Yunga Patience Ijang, Emerson Njokah Wepngong, "et al". Dietary habits and nutritional status of medical school students: the case of three state universities in Cameroon. Pan Afr Med J. 2020; 35: 15. Published online 2020 Jan 23. doi: 10.11604/pamj.2020.35.15.18818.
16. Tok Chen Yun, Siti Rohaiza Ahmad, and David Koh Soo Quee. Dietary Habits and Lifestyle Practices among University Students in Universiti Brunei Darussalam. Malays J Med Sci. 2018 May; 25(3): 56–66. Published online 2018 Jun 28. doi: 10.21315/mjms2018.25.3.6
17. Sami H Alzahrani, Abdulmajeed Abdulaziz Saeedi, Maan Khaleed Baamer, Abdullah Faisal Shalabi, and Abdullah M Alzahrani. Eating Habits Among Medical Students at King Abdulaziz University, Jeddah, Saudi Arabia. **Published** 5 March 2020 Volume 2020:13 Pages 77—88.

DOI https://doi.org/10.2147/IJGM.S246296

18. Al-Rethaiaa AS, Fahmy A-EA, Al-Shwaiyat NM. Obesity and eating habits among college students in Saudi Arabia: a cross sectional study. *BMC Nutr*. 2010;9(1):39. [PMC free article] [PubMed] [Google Scholar]
19. Alshahrani MM, Chandramohan S. A cross-sectional study on prevalence of obesity and its association with dietary habits among college students in Abha, Saudi Arabia. *Int J Community Med Public Health*. 2017;4(5):1406–1412. doi:10.18203/2394-6040.ijcmph20171747 [CrossRef] [Google Scholar]
20. Yahia N, Achkar A, Abdallah A, Rizk S. Eating habits and obesity among Lebanese university students. Nutri J. 2008; 7:32. doi: 10.1186/1475-2891-7-32. [PMC free article] [PubMed] [CrossRef] [Google Scholar].
21. Malak Eisa Abdalla Al-Haj, Hiba A Awooda and Mustafa Khidir Mustafa Elnimeiri. Eating habits among medical students in a Sudanese medical faculty.
22. Ganasegeran K, Al-Dubai SA, Qureshi AM, Al-Abed A-AA, Am R, Aljunid SM. Social and psychological factors affecting eating habits among university students in a Malaysian medical school: a cross-sectional study. Nutr J. 2012; 11:48. doi: 10.1186/1475-2891-11-48. [PMC free article] [PubMed] [CrossRef] [Google Scholar].
23. Tanaka M, Mizuno K, Fukuda S, Shigihara Y, Watanabe Y. Relationships between dietary habits and the prevalence of fatigue in medical students. *Nutrition*. 2008;24(10):985–989. doi:10.1016/j.nut.2008.05.003 [PubMed] [CrossRef] [Google Scholar]
24. Ackuaku-Dogbe EM, Abaidoo B. Breakfast eating habits among medical students. Ghana Med J. 2014; 48:66–70. [PMC free article] [PubMed] [Google Scholar]
25. Tolfrey K, Zakrzewski JK. Breakfast, glycaemic index and health in young people. J Sport Health Sci 2012; 1:149-59.
26. Jasim Naeem AL-Asadi Perceived Stress and Eating Habits among Medical Students. International Journal of Medicine and Pharmaceutical Sciences (IJMPS). ISSN (P): 2250-0049; ISSN (E): 2321-0095. Vol. 4, Issue 3, Jun 2014, 81-90.
27. Abraham, Brooke R. Noriega, Ju Young Shin.College students eating habits and knowledge of nutritional requirements. Sam Bethel College School of Nursing, Bethel College, Mishawaka, Indiana, USA. Journal of Nutrition and Human Health (2018) Volume 2, Issue 1
28. Manisha Pandey, Rohit K Verma, Shubhini A Saraf. Nutraceuticals: a new era of medicine and health. Asian J Pharm Clin Res 2010; 3:11-5.
29. El-Gilany AH, Abdel-Hady DM, El Damanawy R. Consumption and knowledge of fast/junk foods among medical students, Mansoura University, Egypt. TAF Prev Med Bull. 2016; 15:440–5. [Google Scholar].
30. Vijay Shree, R. R. Prasad2, Sanjay Kumar, Setu Sinha1, Sanjay Kumar Choudhary. Study on consumption of fast food among medical students of IGIMS, Patna. Bihar. India
31. http://dx.doi.org/10.18203/2394-6040.ijcmph20182416.

32. Dilkhosh Shamal Ramadhan, Arazoo Issa Tahir, Rebar Yahya Abdullah. Dietary Habits among Medical Science Students in Duhok City. https://doi.org/10.15218/ejnm.2021.08 Erbil j. nurse Midwifery. Vol. 4, No. (2), Nov 2021.
33. Giovannini M, Verduci E, Scaglioni 0S, Salvatici E, Bonza M, Riva E, et al. Breakfast: a good habit, not a repetitive custom. *J Int Med Res*. 2008; 36(4):613–624. doi:10.1177/147323000803600401 [PubMed] [CrossRef] [Google Scholar].
34. Popkin BM, Adair LS, Ng SW. The global nutrition transition and the pandemic of obesity in developing countries. Nutrition Review. 2012; 70(1):3–21. doi: 10.1111/j.1753-4887.2011.00456.x. [PMC free article] [PubMed] [CrossRef] [Google Scholar].
35. Al-Otaibi HH. The pattern of fruit and vegetable consumption among Saudi university students. *Glob J Health Sci*. 2014;6(2):155. [PMC free article] [PubMed] [Google Scholar].
36. Alshahrani MM, Chandramohan S. A cross-sectional study on prevalence of obesity and its association with dietary habits among college students in Abha, Saudi Arabia. *Int J Community Med Public Health*. 2017; 4(5):1406–1412. doi:10.18203/2394-6040.ijcmph20171747 [CrossRef] [Google Scholar

پوختە

پێزانینێن رەوشەنبیریا خارنێ و کریار و نەریتین خارنێ د ناڤ قوتابیین کولیژا پزیشکی ل دهوکێ

پێشەکی و ئارمانج: لاوازیا رەفتارین خارنێ ئیکە ژ ئاریشەیین مەزن پێن ساخلەمیا گشتی دناڤ تەخا گەنجین پێگەهشتی پێن کو خو دبینەڤە ل قوناغا زانکویێ دا کو یا هەڤبەندە دگەل نە تەندروستیا سالوخەتین شیوازێ ژیانێ.

ئارمانج ژ ڤێ ڤەکولینێ هەلسەنگاندنا شیوازێ نەریتێَن خاررنێ د ناڤ قوتابیێن کولیژا پزیشکی دا پێخەمەت بلندکرنا ئاستێ هوشیاریا وان سەبارەت هەرەمێ خارنێ و پالدانا وان بو کارپێکرنێ پێ و هەروەسا زیدەتر هوشیار کەین دەربارەی سوود و مفایێن خارنا تەندروست ژ بو تەندروستیا جەستەیی و دەروونی.

ریکێن ڤەکولینێ: ئەڤە ڤەکولینەکا بڕبڕەییە ل سەر بنەمایێ فاکولتیێ هاتیە ئەنجامدان کو 650 قوتابیێن کولیژا بزیشکی ژ هەردوو رەگەزا و ل هەر شەش قوناغێن کولیژێ بخو ڤەگرتیە . د راپرسیێ دا چەندین پرسیار هەبووینە سەبارەت بارێ جڤاکی و دیموگرافی و نەریتین خارنێ و هەروەسا دەربارەی هەلسەنگاندنا هوکارێن پێزانینا دگەل کێشە و بالایێ . پیڤەرێن باراستێ جەستەی هاتیە بکارئینان بو هەلسەنگاندنا بارێ کێشێ لدەف قوتابیا.

ئەنجام: ئەنجاما خویا کریە کو پیڤەرێ باراستا جەستەی یێ نورمال بوو ل دەف 68.2% و یێ نزم بوو ل دەف 10% و یێ بلند بوو ل دەف 16% و زۆر یێ بلند بوو ل دەف 5.2% ژ قوتابیێن پشکدار. هەروەسا دیاربوو کو 64.5% ژ پشکدارا پیزانینێن باش هەبوون لسەر هەرەمێ خارنێ لێ 56% هیچ پیزانین نەبوون دەربارەی کالوریێن روژانە پێدڤی. زوربەیا وان سێ دانین خارنێ روژانە دخارن و خارنا مالێ ب باشتر د دانا. نیزیکی سێ چاریکێن وان حەژ خارنێن ب لەز و قەمیای دکر. 50.3% ژ پشکدارا دانێ سپیدێ خارن نەدخار، 45.4% فێری خارنا دانەکێ زێدە بووینە ب شەڤ بەری دەمێ خەوێ. 47.7% حەژ خارنێن سیر دکر، 57.4% حەژ خارنا کەسکاتی و زەلاتا دکر دگەل دانێن خارنێ و 84.8% حەژ خارنا فێقی دکر.

دەرئەنجام: وەك دەرئەنجام دیاربوو کو گەلەك ژ قوتابیێن کولیژا پزیشکی ژ هەردوو رەگەزا، نەریتێن نە تەندروست پێن خارنێ هەنە زێدەباری کێمیا پێزانینێن وان دەربارەی هەرەمێ خارنێ و کالوریێن روژانە د پێدڤی. قوتابیێن کولیژا پزیشکی پیدڤی ب پلانا هەیە ل سەر ئاستێ زانکویێ و کولیژێ و هەروسا پیدڤی ب راوێژکاریێ هەیە سەبارەت خارنێ.

الخلاصة

معرفة ثقافة الغذاء و ممارسات تناول الغذاء بين طلاب كلية الطب في دهوك

الخلفية والأهداف: يعد السلوك الغذائي السيئ مشكلة صحية عامة رئيسية بين الشباب الذين يمرون بمرحلة انتقالية إلى الحياة الجامعية ، لأن هذه المرحلة مرتبطة بخصائص نمط الحياة غير الصحية. هدفت هذه الدراسة إلى تقييم نمط عادات الأكل لدى طلاب كلية الطب ، بهدف زيادة وعيهم بالهرم الغذائي وتشجيعهم على تطبيقه وزيادة وعيهم بفوائد الأكل الصحي على الصحة البدنية والعقلية.

طرق البحث: هذه دراسة مقطعية قائمة على أعضاء هيئة التدريس أجريت على 650 طالب من طلاب كلية الطب من كلا الجنسين و للمراحل الدراسية الستة في كلية الطب / جامعة دهوك , يتكون الاستبيان من أسئلة مغلقة حول التركيبة السكانية وعادات الأكل وعوامل تقييم المعرفة ، بالإضافة إلى الوزن والطول و تم استخدام مؤشر كتلة الجسم (BMI) لتقييم حالة وزن الطلاب.

النتائج: أظهرت النتائج أن 68.2٪ لديهم مؤشر كتلة جسم طبيعي ، 10.6٪ لديهم مؤشر كتلة جسم منخفض ، 16٪ لديهم مؤشر كتلة جسم مرتفع و 5.2٪ لديهم مؤشر كتلة جسم مرتفع جداً . 64.5٪ لديهم معرفة جيدة بالهرم الغذائي ، بينما 56٪ ليس لديهم معرفة بالسعرات الحرارية المطلوبة في اليوم. كان معظمهم يتناولون ثلاث وجبات يومياً ويفضلون وجبات محلية الصنع في البيت . ما يقرب من ثلاثة أرباع من الطلاب المشتركين كانوا يفضلون الوجبات السريعة والأطعمة المقرمشة. 50.3٪ اعتادوا تخطي وجبة الإفطار. 45.4٪ اعتادوا تناول وجبة إضافية قبل النوم. 47.4٪ كانوا يفضلون الأطعمة المالحة. 57.4٪ يأكلون السلطات مع الوجبات و 84.8٪ يأكلون الفواكه عادة.

الاستنتاجات: العديد من طلاب الطب من كلا الجنسين لديهم عادات غذائية غير صحية ومعرفة غير كافية بالهرم الغذائي والسعرات الحرارية اليومية المطلوبة. يحتاج طلاب الطب إلى خطط على المستويين الجامعة والكلية واستشارات بشأن التغذية.